

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

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Date of mailing (day/month/year)

08 February 2007 (08.02.2007)

Applicant's or agent's file reference

P 16612WO

IMPORTANT NOTIFICATION

International application No.

PCT/EP2005/005632

International filing date (day/month/year)

25 May 2005 (25.05.2005)

Applicant

SCHOTT AG et al

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

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The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P 16612WO		FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2005/005632	International filing date (day/month/year) 25.05.2005	Priority date (day/month/year) 29.05.2004	
International Patent Classification (IPC) or national classification and IPC A61K6/083, A61K6/027, C03C3/066			
Applicant SCHOTT AG			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of _____ sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of **10** sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2005/005632

Box No. 1

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-32 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-27 _____ received by this Authority on 15.02.2006 with letter
- nos.* _____ received by this Authority on of 14.02.2006
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	
1. Statement		
Novelty (N)	Claims <u>1-27</u>	YES
	Claims _____	NO
Inventive step (IS)	Claims <u>1-27</u>	YES
	Claims _____	NO
Industrial applicability (IA)	Claims <u>1-27</u>	YES
	Claims _____	NO
2. Citations and explanations (Rule 70.7)		
1 Reference is made to the following document:		
D7: WO 03/018498 A (mentioned in the application)		
2 NOVELTY		
<p>The subject matter of claims 1 to 27 is novel within the meaning of PCT Article 33(2).</p>		
<p>Document D7 describes glasses having an antimicrobial, anti-inflammatory and disinfectant action in which an Ag₂O content of from 0 to 5% by weight may also be present. However, these glass powders are used in the field of dental medicine as additions to compositions for dental hygiene, especially the avoidance of gum bleeding (see D7, claims) and not, as in the present application, in materials for dental restoration, especially for tooth filling. It is accordingly concerned with the field of oral hygiene, which really has nothing to do with tooth fillings. There is likewise no indication of the use of materials for dental restoration. Nor is a combination with materials for tooth filling, especially glass ionomers composites and compomers, and the special effect of the combination, evident therefrom.</p>		

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**3 INVENTIVE STEP**

The object of the application is to provide additions for dental materials which have an antimicrobial and disinfectant, anti-inflammatory and wound-healing effect.

The object is achieved by the use of glass compositions with an antimicrobial effect in materials for dental restoration, where the glass composition includes the components in the amounts of claims 1 to 27.

Document D7 describes glasses having an antimicrobial, anti-inflammatory and disinfectant action in which an Ag₂O content of from 0 to 5% by weight may also be present. However, these glass powders are used in the field of dental medicine as additions to compositions for dental hygiene, especially the avoidance of gum bleeding (see D7, claims) and not, as in the present application, in materials for dental restoration, especially for tooth filling. It is accordingly concerned with the field of oral hygiene, which really has nothing to do with tooth fillings. There is likewise no indication of the use of materials for dental restoration. Nor is a combination with materials for tooth filling, especially glass ionomers composites and compomers, and the special effect of the combination, evident therefrom.

Precisely the use according to the invention of the very specific glass compositions with an antimicrobial and/or disinfectant effect together with materials for dental restoration, especially tooth filling, exhibit very particularly advantageous properties. Thus, for example, use of the antimicrobial glass powders of the invention together with compomers results in less shrinkage. In addition, the mechanical properties of glass ionomers are improved and a strong binding effect of the composites is achieved (see

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

page 17, lines 12 to 15). A further advantage of the mixtures of glass compositions having antimicrobial activity according to the application, especially in combination with glass ionomers, is that the antimicrobial effect of the mixture exceeds the antimicrobial effect of the glass composition alone because the release of ions with antimicrobial activity, for example silver, from the antimicrobial glass composition is stimulated by the ions released from the glass ionomer. The development of secondary caries is avoided or at least markedly slowed down through this surprisingly enhanced antimicrobial effect (see, for example, page 15, lines 20 to 25).

The prior art does not lead to the teaching of the present invention because a person skilled in the art requires a reason, particular indication or suggestion in order to arrive at the combination according to the invention.

Accordingly, the teaching of claims 1 to 27 is inventive within the meaning of Article 56 EPC over D7.